

**Before The
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C.**

In the Matter of)	
)	
Inquiry Regarding Carrier Current Systems,)	ET Docket No. 03-104
including Broadband over Power Line)	
Systems)	

COMMENTS OF REC NETWORKS

REC Networks ("REC") is a supporter of locally owned and diverse radio. REC currently operates several Internet only radio stations. REC also operates several websites including the original LPFM Channel Search Tool¹. REC Networks also represents the interests of independently owned Low Power FM ("LPFM") broadcast stations and their listeners. REC also follows issues that involve the availability of media in rural and underserved areas.

In this proceeding, REC is in a very peculiar situation. REC sees Broadband over Power Line (BPL) as a method to bring high speed Internet access to those who live in rural areas. However, we have concerns about interference from BPL systems to the Amateur Radio Service, disaster communications networks, homeland security as well as international broadcast stations.

INTERFERENCE TO THE AMATEUR RADIO SERVICE

The heart of the BPL system will operate in the high frequency (HF) spectrum². This covers many amateur bands that are used for long distance communications. In these bands, the ability to receive weak signals³, especially in distress situations is paramount. All amateur radio spectrum⁴, including the recently approved channels at 5 MHz⁵ must be protected.

¹ - <http://www.recnet.com/lpfminfo>

² - High Frequency spectrum is the band between 3 and 30 MHz.

³ - See §97.313(a) An amateur station must use the minimum transmitter power necessary to carry out the desired communications.

⁴ - The Amateur Radio Service has an MF allotment at 160 meters as well as HF allotments at 80, 75, 60, 40, 30, 20, 17, 15, 12 and 10 meters.

⁵ - See "Amendment of Parts 2 and 97 of the Commission's Rules to Create a Low Frequency Allocation for the Amateur Radio Service". ET Docket 02-98, DA 03-105 at 31.

INTERFERENCE *FROM* THE AMATEUR RADIO SERVICE

Since the Amateur Radio Service is a licensed service, it has spectrum priority over Part 15 operations such as BPL. Part 15 operations are not protected from the Amateur Service. If BPL is permitted to operate on amateur frequencies, REC is concerned about the quality of service that a customer will receive if they live near a licensed amateur radio operator who uses their equipment legally. Since BPL will be required to accept interference from the amateur service, it is very possible that some end-users of the BPL service who learn that it is amateur operations that cause their broadband connection not to work may "take the law into their own hands" when they realize that the law does not protect them.

REC is also concerned about increased pressure from local governments to pass new ordinances that restrict Amateur Radio Service operators from operating from their residences, especially if the power company is municipally owned. Although REC is aware of federal preemption⁶ of local antenna ordinances, we feel that amateurs will face new challenges, which will eventually be settled through PRB-1 or through other federal preemptions on radio communications.

Because of this interference from the amateur service, we will be going back to the late-70's when CB radios were popular and television interference from CBs (most of them running legal power) caused people to commit criminal acts against the operator of the CB radio. This was before cable was popular. REC is very afraid that licensed amateur operators may be subject to this 21st century version of "TVI revenge".

INTERFERENCE TO INTERNATIONAL BROADCAST STATIONS

Expatriates as well as others with interests in foreign information and culture depend on various media sources to receive information and entertainment. Modern day resources include

⁶ - See *"Federal Preemption of State and Local Regulations Pertaining To Amateur Radio Facilities"* - 01 FCC 2nd 922. This action is also known as "PRB-1".

receiving information from the Internet, direct to home (DTH) satellite services⁷ as well as "free to air" (FTA) satellite services⁸.

However, long before satellite TV and the Internet, people from all over the world depend on international broadcast stations operating on shortwave frequencies⁹ to receive entertainment and information. To this day, these shortwave stations are well used. In fact, many countries that are on shortwave are not available via DTH or FTA satellite.

For many foreign nationals living and visiting the United States, shortwave is their primary link to their home. Interference caused by BPL devices to the international broadcasting service would basically cut off a lifeline to someone's homeland.

THREAT TO HOMELAND SECURITY

As we have heard in the *Report and Order* for ET Docket 02-98, the National Telecommunications and Information Administration (NTIA) is currently evaluating their High Frequency (HF) usage for homeland security purposes¹⁰. We also point out that stakeholders in the telecommunications infrastructure maintain HF radio networks as backup communications¹¹. With this new attention to HF as a part of the country's disaster recovery and homeland security efforts, it's more important that the entire HF spectrum be clear of unnecessary interference from commercial devices.

⁷ - Direct to Home satellite services operated by Echostar Corporation (DISH Network) provide premium channels in several different European languages as well as programming from the Middle East and Asia. These services require an ongoing subscription to Echostar service as well as a permanent location that faces the south. For many people who can not construct a dish pointed at 61.5 WL or 148 WL, they are dependent on HF shortwave broadcasts for information about their homeland. Many of these locations that can't get satellite service are multiple dwelling units (MDUs) which already receive very weak shortwave service. The introduction of BPL will only make it worse.

⁸ - Free to Air (FTA) satellite services are commonly on Ku band but also exist on C-band.

⁹ - International Broadcast Stations targeting the United States and North America operate in multiple bands between 5 and 26 MHz.

¹⁰ - See "Amendment of Parts 2 and 97 of the Commission's Rules to Create a Low Frequency Allocation for the Amateur Radio Service". ET Docket 02-98, DA 03-105 at 29.

¹¹ - From the days of the Bell System, the Regional Bell Operating Companies operate a National Security Emergency Preparedness (NSEP) HF radio network on various frequencies in the HF bands. Some of these radios are located in major phone company buildings while others are in central switching offices and can even be carried portable.

ELECTRIC RATEPAYERS SHOULD NOT SUBSIDIZE THE CONSTRUCTION OR MAINTENANCE OF THE BPL INFRASTRUCTURE

REC is concerned that some utility companies, especially those in rural areas will pass the costs of the BPL network directly to the ratepayers, especially those who are on fixed incomes or who otherwise have limited resources.

It is paramount that in the event that any BPL system is ever offered, it must be operated by an entity independent of the regulated power company. REC feels that the state public utility commissions need to step up to the plate to assure that the average consumer who does not use the service will not be stuck paying for these network "upgrades".

ALTERNATE SERVICES ARE AVAILABLE IN MANY AREAS

Even though we recognize that many rural communities are not 'wired' yet, the number of areas getting broadband are starting to increase. REC feels that providing fixed broadband services using television spectrum¹² serves the public interest much better than the BPL service. More and more wireless ISPs are popping up in areas that otherwise are outside the reach of cable, DSL and even ISDN.

Rural communities are also very dependent on the communications of amateur radio operators during local and regional emergencies and access to all amateur HF frequencies free of unnecessary power line interference is paramount.

¹² - See ET Docket 02-380.

CONCLUSION

REC Networks feels that Broadband over Power Line technology is more trouble than what it's worth. It will cause harmful interference to licensed radio services and potential interference from the authorized radio services could render the service useless in some cases. This may drive some to take the law into their own hands to assure they can keep their broadband service. We are also concerned that additional municipal restrictions will be placed on licensed amateur operations as a result of "interference" to BPL services, especially when the BPL system is operated by the municipality. BPL operated in the HF bands will cause foreign nationals to lose touch with their homeland. BPL will create new interference to both government and non-government HF users who are charged with maintaining the national telecommunications infrastructure as well as assure homeland security.

While we feel that there is a need to expand availability of broadband services, especially in rural areas, we can not support BPL devices operating anywhere in the MF and HF spectrum between 525 kHz and 29.7 MHz.

Respectfully Submitted,

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